

AMENDMENTS TO THE SPECIFICATION:

Please add the following centered subheading on page 1, after the title:

TECHNICAL FIELD

Please add the following centered subheading on page 1, between lines 5 and 6:

BACKGROUND AND SUMMARY

Please add the following centered subheading on page 2, between lines 16 and 17:

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend the paragraph beginning at page 2, line 21, as follows:

Figs. 1A and 1B are schematics ~~Fig. 1 is a schematic of an end view of a duct~~
containing cables, illustrating the purpose of the invention;

Please amend the paragraph beginning at page 2, line 27, as follows:

Figs. 3A and 3B are schematics ~~Fig. 3 is a schematic of a first path-finding head~~
according to the invention;

Please amend the paragraph beginning at page 3, line 1, as follows:

Figs. 4A and 4B are schematics ~~Fig. 4 is a schematic of a second path-finding~~
head according to the invention;

Please amend the paragraph beginning at page 3, line 7, as follows:

Figs. 6A and 6B are schematics ~~Fig. 6 is a schematic of a fourth path-finding~~
head according to the invention.

Please add the following centered subheading on page 3, between lines 8 and
10:

DETAILED DESCRIPTION

Please amend the paragraphs beginning on page 6, line 3, as follows:

Path-finding head 20D shown in Fig. 6A and 6B, comprises a rotational cutter 60 at the front of the head. The rotational cutter 60 is cylindrical and manufactured from tool steel or other such hardwearing tool material, and includes a ring of teeth 62 at the front thereof. The teeth 62 of the cutter 60 therefore face the direction of sub-duct advancement. Extending rearwardly from the rotational cutter 60 is a double sleeve portion 64 having an inner sleeve 66 and an outer sleeve 68, extending away from the rotational cutter 60. A third sleeve 70 is insertable into the double sleeve 64. A helical thread 75 is formed on the surface 73 of the inner sleeve 66 and a lug on the inner surface 71 of the third sleeve 70 ~~inner sleeve 66~~ projects into it. A helical spring 77 is coiled around the inner sleeve 66 such that it occupies the gap between the inner sleeve 66 and the outer sleeve 68, and biases the third sleeve 70 away from the cutter 60.

In use, the third sleeve 70 is attached to the sub-duct 12. The cable 4 passes through the inner sleeve 66 and through the rotational cutter 60. Fig. 6A shows the head 20D attached to the sub-duct 12. Whilst the sub-duct 12 is advanced along the cable 4, the spring 77 is relaxed. In the event of requiring the cutter 60 to cut away an adhered or jammed cable 4, a force must be applied to the sub-duct 12 to produce reciprocating movement of the sub-duct 12. The linear motion of the sub-duct 12 transfers the motion directly to the third sleeve 70, and the engagement of the lug with the helical thread 75 ensures that as the third sleeve 70 advances, the inner sleeve 66 ~~sleeve 60~~ rotates, thus rotating the cutter. Cutting takes place during the advancement of the head 20D. The advancing third sleeve 70 compresses the helical spring 77 as shown in Fig. 6B. Releasing the force applied to the sub-duct 12 releases the spring 77 ~~spring 75~~ and the mechanism returns to rest as shown in Fig. 6A. Cutting ceases during retraction of the head 20D. Repeatedly applying and releasing force on the sub-duct 12 hence provides an intermittent rotational cutting motion. This could be achieved manually, but could be more effective if applied with a pushing machine (not shown). Thus an advantage of path-finding head 20D is that linear motion is translated via the helical thread 75 to rotating motion so as to facilitate the rotational cutter 60. Compressed gas may be applied to the obstruction whilst using the cutting heads 20C and 20D to assist removal of the obstruction.